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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/755,528

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Yoji Yamamoto

82478-4500

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21611

7590

03/23/2006

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EXAMINER

HODGES, MATTHEW P

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/755,528

Applicant(s)

YAMAMOTO ET AL.

Examiner

Matt P. Hodges

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 4-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi et al. (US 6,130,502).

Regarding claims 5, 8, and 9, Kobayashi discloses (see figure 7) a cathode ray tube including an electron gun, where the electron gun further uses a cathode structure including a columnar electric insulating material body (21 and 36) a cathode unit (23) disposed at one end of the body, and a heater (25) embedded in and disposed at a second end of the body with leads extending from a side of bottom of the body (36). The body further includes protrusions (sides of 21) that extend outward between the leads and the cathode. (Column 14 lines 19-40).

Regarding claims 1, 4, 6, and 7, Kobayashi alternatively discloses the device as described above, however the second end surface is the side portions of the bottom of the body portion (36). Further the body portion includes a portion (21) that is of a greater diameter than that of the second end surface. (See figure 7).

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Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Waltermire (US 3,671,792).

Regarding claims 1 and 6, Waltermire discloses (see figure 1) an electron gun, where the electron gun further uses a cathode structure including a columnar electric insulating material body (6) a cathode unit (3) disposed at one end of the body, and a heater (5) embedded in and disposed at a second end of the body with leads extending from the bottom. (Column 2 lines 19-65).

Regarding claims 2 and 3, the body further includes conductive wall portions (2) that extend on an outward side of the insulating central portion and extend around the perimeter of the insulating portion. Further the second end surface rises in a dome shape. (See figure 1).

Claims 1-3, 6, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Ney (US 3,175,118).

Regarding claims 1, 6, and 7, Ney discloses (see figures 1 and 2) a cathode ray tube including an electron gun, where the electron gun further uses a cathode structure including a columnar electric insulating material body (34 and 36) a cathode unit (6) disposed at one end of the body, and a heater (30) embedded in and disposed at a second end of the body with leads extending from the bottom. (Column 2 lines 47-65).

Regarding claims 2 and 3, the body further includes wall portions that extend around the periphery of the bottom of the body and, at least in part, surround the lead portions. Further the interior of the walls and the base of the body together form a dome shape. (See figure 2).

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### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Misumi (US 3,745,403) discloses the use of a coiled heater below the cathode structure and insulated from the cathode structure.

Ricaud (US 6,946,781) discloses the use of a cathode heater with lead portions exiting from the side of the heater.

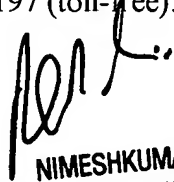
### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matt P Hodges whose telephone number is (571) 272-2454. The examiner can normally be reached on 7:30 AM to 4:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mph



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